Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

[1] (Currently amended) A method for treating exhaust gas using a first plasma reactor and a second plasma reactor that are operationally connected in series along an exhaust gas line,

the method comprising:

a first step of adsorbing target components including NO_x in the exhaust gas with an adsorbent~~;~~ ,

introducing a nitrogen gas with an oxygen concentration of 10 vol% or less and a purity of 90 vol% or more into the adsorbent~~;~~ , and

applying first nonthermal plasma of the nitrogen gas to the adsorbent by generating an electric discharge, thus causing desorption of the target components and regeneration of the adsorbent~~,~~ ; and

~~wherein after the adsorbent adsorbs the target components in the exhaust gas, the nitrogen gas is introduced into the adsorbent, and then an electric discharge is generated so that the nonthermal plasma of the nitrogen gas is applied to the adsorbent and causes desorption of the target components and regeneration of the adsorbent, and~~

~~subsequently~~ a second step of reducing NO_x ~~is reduced~~ to N_2 by further applying second nonthermal plasma to the target components desorbed by the ~~nitrogen gas~~ first nonthermal plasma ~~in a plasma reactor for removing the target components that follows or is integrated with the adsorbent~~ ,

wherein the first step is performed in the first plasma reactor, and the second step is performed in the second plasma reactor, the second plasma reactor following or being integrated with the first plasma reactor.

[2] (Canceled)

[3] (Original) The method according to claim 1, wherein the adsorbent is zeolite with an average pore size of 0.1 to 5 nm.

[4] (Currently amended) The method according to claim 1, wherein the exhaust gas is combustion exhaust gas, and the target components are at least one selected from the group consisting of NO, NO_2, N_2O, N_2O_5, SO_2, SO_3, volatile organic compounds (VOCs), ~~pollutants as typified by~~ dioxins, hydrocarbons, CO, CO_2, and water vapor (H_2O).

[5] (Original) The method according to claim 1, wherein the nitrogen gas with an oxygen concentration of 10 vol% or less and a purity of 90 vol% or more is part of exhaust gas emitted from a diesel engine.

[6] (Currently amended) The method according to claim 1, wherein a gas temperature of the nitrogen gas plasma is ~~1000 K~~ 300°C or less.

[7] (Original) The method according to claim 1, wherein the plasma is applied by using pulse discharge with an alternating or direct voltage, silent discharge, corona discharge, surface discharge, barrier discharge, honeycomb discharge, pellet packed bed discharge, or any combination of these processes.

[8] (Original) The method according to claim 1, wherein the plasma is applied by using arc discharge with an alternating or direct voltage, inductively coupled discharge, capacitively coupled discharge, microwave excited discharge, laser induced discharge, electron-beam induced discharge, particle-beam induced discharge, or any combination of these processes.

[9] (Currently amended) The method according to claim 1 or 3, wherein a catalyst is located in at least one of the following: inside of the adsorbent of the first plasma reactor; inside of ~~a~~ the second plasma reactor; and downstream of the second plasma reactor.

[10] (Currently amended) An apparatus for treating exhaust gas comprising:

a first plasma reactor comprising:

an adsorption portion for adsorbing target components including NO_x in the exhaust gas with an adsorbent;

a gas flow path through which a nitrogen gas with an oxygen concentration of 10 vol% or less and a purity of 90 vol% or more is introduced into the adsorbent; and

a ~~reactor~~ device for applying first nonthermal plasma to the adsorbent; and

a second plasma reactor following or being integrated with the first plasma reactor,

wherein in the first plasma reactor, the adsorbent adsorbs the target components in the exhaust gas, the nitrogen gas flows through the gas flow path in which the adsorbent is present, and an electric discharge is generated so that the first nonthermal plasma of the nitrogen gas is applied to the adsorbent and causes desorption of the target components and regeneration of the adsorbent, and

wherein ~~a plasma reactor for removing the target components follows or is integrated with the reactor and reduces~~ in the second plasma reactor, NO_x is reduced to N_2 by further applying second nonthermal plasma to the target components desorbed by the ~~nitrogen gas~~ first nonthermal plasma.

[11] (Original) The apparatus according to claim 10, wherein the apparatus is installed in a combustion system of any one of a diesel engine, a boiler, a gas turbine, and an incinerator.

[12] (Currently amended) The apparatus according to claim 10, wherein a plurality of flow paths are arranged ~~in a switchable manner~~, each path including at least one of the first plasma reactor and the second plasma reactor, and the apparatus further comprises a means for switching the flow paths so that the first plasma reactor ~~for applying nonthermal plasma to the adsorbent~~ and ~~a~~ the second plasma reactor ~~for removing the target components~~ are operationally connected in series from a gas inlet toward an outlet in the flow paths.

[13] (Currently amended) The apparatus according to claim 12, wherein the ~~flow paths are switched by~~ means for switching the flow paths is a valve or rotor.

[14] The apparatus according to claim 10, wherein flow paths through which the target components are desorbed and converted into harmless components become an exhaust gas recirculation system.

[15] (Original) The apparatus according to claim 10, further comprising an exhaust device that accelerates the adsorption and desorption by changing a gas pressure to more than or less than atmospheric pressure.

[16] (Original) The apparatus according to claim 10, further comprising a device that accelerates the adsorption and desorption by heating or cooling the exhaust gas or the nitrogen gas.

[17] (Original)The apparatus according to claim 10, further comprising a gas measuring device that includes a sensor for detecting an oxygen concentration in the exhaust gas.

[18] (Original)The apparatus according to claim 10, further comprising a particulate collector for collecting aerosol or particles in the exhaust gas.

[19] (Original)The apparatus according to claim 10, further comprising a humidity controller for controlling a humidity of the exhaust gas or the nitrogen gas.

[20] (Original)The apparatus according to claim 10, wherein the nitrogen gas with an oxygen concentration of 10 vol% or less and a purity of 90 vol% or more is part of exhaust gas emitted from a diesel engine.